Writing the Equation of a Quadratic Function

Method 1: Given Roots

Example: Write the equation of the quadratic with roots 3 and -5

$x = 3$ and $x = -5$ — Set $x =$ each root

$x - 3 = 0$ and $x + 5 = 0$ — Move each x to $= 0$

$(x-3)(x+5) = 0$ — Write each as a product (multiply)

$x^2 + 5x - 3x - 15 = 0$ — FOIL / Distribute

$x^2 + 2x - 15 = 0$

You Do:

1) Roots 6 and 2

$x = $ and $x = $

$\quad = 0$ and $\quad = 0$

$(\quad)(\quad) = 0$

$x^2 - 8x + 12 = 0$

2) Roots -4 and 5

$x^2 - x - 20 = 0$